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ATTORNEYS FOR PLAINTIFF
ADASA INC.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

EUGENE DIVISION

ADASA Inc., Plaintiff, v. **AVERY DENNISON CORPORATION,** Defendant.	Case No.: 6:17-cv-1685 **COMPLAINT** **JURY TRIAL DEMANDED**

Plaintiff ADASA INC. ("Plaintiff" or ADASA") files this Complaint against Defendant AVERY DENNISON CORPORATION alleging as follows:

I. THE PARTIES

1. ADASA INC. is a corporation organized and existing under the laws of the State of Oregon, with a principal place of business in Eugene, Oregon.

2. Upon information and belief, Defendant AVERY DENNISON CORPORATION ("Defendant" or "AVERY DENNISON") is a corporation organized and existing under the laws of the State of Delaware, with a principal place of business in Glendale, CA. AVERY DENNISON's Retail Branding and Information maintains an office in Beaverton, Oregon. AVERY DENNISON may be served with process through its registered agent, CT Corporation System located at 78 Commercial Street SE, Suite 100, Salem, OR 97301.

II. JURISDICTION AND VENUE

3. Plaintiff's claims for patent infringement against AVERY DENNISON arise under the patent laws of the United States, including 35 U.S.C. §§ 271 and 281. Consequently, this Court has exclusive jurisdiction of such action under Title 28 U.S.C. § 1331 and 1338.

4. AVERY DENNISON is a company with offices throughout the United States. AVERY DENNISON is subject to both the specific and general personal jurisdiction of this Court because, among other things, it has established continuous and systematic contacts with Oregon and in this judicial district, including having a regular and established place of business in the District of Oregon and throughout the State of Oregon via AVERY DENNISON's Retail Branding and Information Solutions located in Beaverton, Oregon, which includes, at least in part, its retail RFID business; it has committed acts of patent infringement within Oregon and this judicial district giving rise to this action; and it has minimum contacts with the forum such that the exercise of jurisdiction over it would not offend traditional notions of fair play and substantial justice. For all of these reasons, personal jurisdiction exists and venue is proper in this Court under 28 U.S.C. §§ 1391(b)(1), (2) and (c)(2) and 28 U.S.C. § 1400(b).

III. PATENT-IN-SUIT

5. On October 24, 2017, U.S. Patent No. 9,798,967 ("the '967 Patent") was duly and legally issued for "SYSTEMS, METHODS, AND DEVICES FOR COMMISSIONING WIRELESS SENSORS." A true and correct copy of the '967 patent is attached hereto as Exhibit A.

6. Plaintiff is the owner of the '967 Patent with the exclusive right to enforce the '967 Patent against infringers, and collect damages for all relevant times, including the right to prosecute this action.

7. The '967 Patent generally speaking, relates, in part, to systems for encoded and commissioned wireless radio frequency identification ("RFID") devices. The '967 Patent teaches an RFID transponder or inlay with an RFID integrated circuit chip ("IC chip") having encoded memory structure that ensures uniqueness within the serial number portion of the code.

IV. BACKGROUND

8. Clarke McAllister, the named inventor of the '967 Patent, has worked with and in the RFID industry since the early 1990s, including founding his own RFID company, ADASA, in 2004.

9. At the time McAllister founded ADASA, the RFID industry was beginning to challenge the then-predominant method of using individual bar codes to keep track of merchandise. The industry has since developed standards and guidelines for encoding data onto the RFID tags to provide additional information beyond what can be stored in a barcode, which allows for identifying and tracking individual items in the supply chain.

10. As a brief technical background, in the RFID industry, and particularly for merchandise tracking applications, the memory bank of an RFID tag is encoded with an

Electronic Product Code ("EPC"), which is an identifier for an item in the supply chain to uniquely identify that particular item. This identifier is serialized to be unique for avoidance of duplicate numbers among items in the supply chain. The EPC can be in a format in accordance with one of various EPC tag data standards set by GS1 for a serialized identifier, such as a Serialized Global Trade Item Number (SGTIN), Serial Shipping Container Code (SSCC), Serial Global Location Number (SGLN), or the like.

11. For the SGTIN format, the EPC contains "object class" information and a "serial number." The "object class" information includes, among other things, a GS1 "company prefix," which identifies the managing organization responsible for the item (*i.e.*, the brand owner) and an "item reference number" which identifies the class of item offered by a brand owner (which generally corresponds to the UPC or SKU of a bar code).

12. The "object class" information of the SGTIN is not unique in and of itself. The function of this section of a SGTIN format is to identify different types of products that may be sold by a particular brand owner. For example, a brand owner (such as Haggar, the clothing company) may assign a particular product line of its men's pants an "object class" number. With such a designation, each pair of that type of men's pants would have a common "object class" number, but each specific pair of men's pants within that type would not be unique without further identification. Therefore, in order to provide a unique identifier and avoid duplication of numbers, the brand owner is responsible for assigning a unique serial number for each item within an object class. The brand owner can delegate the assignment of the serial number to another party or parties, however the brand owner retains ultimate responsibility for managing assignment of the serial number. The combination of an object class and unique serial number provides a unique object number that is contained within the EPC.

13. In early 2008, McAllister recognized the challenge in the industry that there was not a reliable way to ensure global uniqueness of the EPC for items within one object class when the RFID tags are encoded by different encoders in different locations across the distribution chain. Prior to Mr. McAllister's invention, other methods of managing and assigning EPCs did not provide the level of specificity in managing the assignment of the EPCs taught in the '967 Patent or ensure that the EPC provided to an item would be globally unique without requiring real-time access to a central database to assign the next available unique EPC to each item in an object class.

14. This is exemplified by the RFID industry's use of the "EPC Pure Identity URI" methodology. The EPC Pure Identity is what is known as a canonical form, using a finite sequence of decimal digits, punctuated by periods. In this format, no attention is given to managing the uniqueness of the EPC on the "binary" level (*i.e.*, at the zeroes and ones that make up the most basic bits of the code at the machine level), rather choosing a simpler and less effective "decimal" or "hexadecimal" level representation of the EPC that is in a human readable format. For example, a "decimal" EPC Pure Identity URI may read as follows:

0017457.057157.338690212

In contrast, a "binary" level encoding of the same RFID tag in SGTIN-96 format would read as follows:

00110000001101000000000100010000110001000011011111010001010000000001010000110000000000010100100

The EPC Pure Identity lacks the ability to provide information that uniquely distinguishes between objects of the same object class that, for example, are encoded at one manufacturing facility versus another, unless that information is specifically tracked in a database. To address this challenge, McAllister focused not on the Pure Identity representation of the EPC, but rather

more specifically on the "serial number" portion of the binary level encoding of the EPC to better provide for managing the full serial number range at the machine code level. This allows an RFID encoder to encode a tag and/or an RFID reader to read a tag and be able to differentiate between items without human intervention and without requiring access to a central database each time a tag is encoded or read.

15. In particular, as an example of McAllister's invention, an RFID IC chip encoded with the SGTIN-96 format has a total of 96 binary bits in its memory bank, with the last 38 bits being the "serial number" section:

A typical EPC SGTIN-96 Structure:

Header	Filter / Object Type	Partition	Company Prefix	Item Ref and Indicator	Serial
8 bits	3 bits	3 bits	20- 40 bits	24 - 4 bits	38 bits

McAllister's invention configures an RFID IC chip's memory structure to further delineate a section using the leading bits of the serial number section of the EPC binary encoding, which are referred to in the '967 Patent as the "most significant bits." In other words, McAllister subdivided the serial number section of an RFID IC chip's memory into a "most significant bits" portion and a remaining portion of "lesser significant bits." McAllister's idea was that by using "most significant bits" at the beginning of a serial number section and assigning those most significant bits as a block to a particular encoder, a brand owner could create a separate, encoder-managed serial number section within the larger serial number section of the binary encoding of the EPC. This enables each encoder to reliably ensure the uniqueness of the serial numbers encoded to the tags, and therefore control the uniqueness of the EPC for each item within an object class at the machine code level. This also allows the EPC of the tag to be read by a reader

to identify the particular encoder that encoded the tag using the machine level encoding. These benefits can be obtained without requiring access to a central database, which provides for a reduction in time for the tags to be encoded and/or read that can be quite significant over the course of encoding or reading a large quantity of tags.

16. This section of "most significant bits" of the RFID IC chip's memory is designated to correspond to a block of serial numbers allocated by the brand owner or by agreement between the brand owner and a third-party encoder for use by an encoder in encoding tags for a specific object class. Such a block of serial numbers can be allocated to an entity, such as a service bureau (like AVERY DENNISON's RFID Ticket Express Service Bureau), manufacturer, distributor, or retailer; to a location, such as an assembly line or manufacturing facility; or to a particular encoding machine.

17. In the years after McAllister originally filed for patent protection for his invention, the industry began implementing McAllister's idea in wide-spread fashion and without attribution. For instance, third party encoders, such as AVERY DENNISON, encode RFID tags for brand owners using three or more of the most significant bits of the serial number portion of the binary encoding of the EPC in the RFID chip's memory structure to create unique serial numbers.

V. FIRST CLAIM FOR RELIEF
(Patent Infringement)

18. Plaintiff incorporates by reference Paragraphs 1 - 17 of this Complaint as if set forth below.

19. AVERY DENNISON is liable under 35 U.S.C. §271(a) for direct infringement of the '967 Patent, either literally or under the doctrine of equivalents, because it makes, uses, sells,

offers for sale, and/or imports encoded RFID tags and labels that use the unique encoded structure identified in the claims of the '967 Patent.

20. AVERY DENNISON in the past has directly infringed and continues to directly infringe at least claims 1-6, 8, 10-15 of the '967 Patent by, at a minimum, AVERY DENNISON's RFID Ticket Express Service Bureau, making, encoding, selling, and offering to sell EPC Class 1, Generation 2 UHF RFID tags and labels to its customers, such as brand owners, manufacturers, distributors, retailers and other end users that use the above-referenced memory structure. To the extent AVERY DENNISON encodes these tags and inlays for its customers using the format of "most significant bits" within the serial number space for its customers, it infringes the above claims of the '967 Patent.

21. More specifically, AVERY DENNISON makes, encodes, sells, and offers to sell RFID tags and labels for customers, which are RFID transponders that comprise a substrate, an antenna, and an RFID IC chip coupled to the antenna. The RFID IC chips are provided to AVERY DENNISON in the accused products by Impinj, NXP, EM Microelectronics, and other chip manufacturers. AVERY DENNISON manufactures inlays using these IC chips and then converts the inlays into tags and labels. Upon information and belief, AVERY DENNISON does not publicly identify the product name or number for its tags and labels. However, for example, AVERY DENNISON offers at tags and labels to its customers with at least the following inlays: AD-160u7, AD-171m5, AD-172u7, AD-180u7, AD-226iM, AD-227m5, AD-229r6, AD-229r6-P, AD-233m5, AD-236u7, AD-237r6, AD-237r6-P, AD-318m5, AD-319eMm AD-320u7, AD-321r6, AD-370u7, AD-380iM, AD-381m5, AD-383u7, AD-550m5, AD-661r6, AD-661r6-P, AD-680r6, AD-680r6-P, and AD-806u7. AVERY DENNISON then encodes the IC chips of the tags and labels pursuant to GS1 standards and guidelines and in accordance with the

specifications from by the managing organization responsible for the item, *i.e.*, brand-owners or which are delegated to AVERY DENNISON.

22. AVERY DENNISON encodes the RFID tags and labels with an EPC. The EPC is encoded as a binary encoding within the memory structure of the RFID IC chip of the tag having an object class information space and a unique serial number space. The object class information space is encoded with the object class information for an item and the unique serial number space is encoded with a unique serial number for that specific item within that object class. A limited number of most significant bits of the serial number space within the EPC binary encoding is fixed to correspond to a limited number of most significant bits assigned to the block of serial numbers that was allocated to the encoder by the brand owner and/or by agreement between the brand owner and AVERY DENNISON or by delegation to AVERY DENNISON. The remaining bits of lesser significance are encoded from one unique serial number selected from the range of serial numbers within the block allocated to the encoder, which can be issued by the encoder in linear sequence, randomly, or otherwise in accordance with the specifications from by the managing organization responsible for the item or as determined by delegation to AVERY DENNISON.

23. In particular, AVERY DENNISON encodes an EPC SGTIN-96 binary encoding in the memory bank of the RFID tags and labels, with the unique serial number being encoded in binary form within the 38 bits of the serial number space, and with 3 or more of the most significant bits of the serial number space that corresponds to a block allocated to the encoder for a specific object class. For example, scanned RFID tags associated with various Global Company Prefixes of known AVERY DENNISON customers reflect that at least 18 most significant bits of the 38-bit serial number section are fixed to correspond to the most significant

bits of an allocated block of serial numbers. Some or all of the remaining 20 least significant bits are encoded with one unique serial number instance from the allocated block of serial numbers. One example is provided below for tags scanned for Global Company Prefix 0088542.

38 bit Serial Number Section: 00000000011110000100000000**********

18 Most Significant Bits Varied Least Significant Bits

24. Upon information and belief, these fixed most significant bits of the serial number space within the EPC SGTIN-96 binary encoding provide distinguishing information for items within an object class, such as identifying AVERY DENNISON as the party who is authorized to perform the encoding of the RFID tag or label, the particular location or encoding machine used by AVERY DENNISON to encode the RFID tag or label, and/or the assembly line, manufacturing facility, contract manufacturer, distributor, or retailer where the tag or label is to be applied to the item.

25. To the extent AVERY DENNISON encodes any of the tags and labels identified in paragraph 21 of this complaint using the format specified herein, AVERY DENNISON has infringed the identified claims of the ‘967 Patent.

26. AVERY DENNISON has had actual notice of its infringement of the claims that were issued in the ‘967 Patent since receipt of a letter sent on October 6, 2017 to AVERY DENNISON’s counsel of record from the previously litigation between the same parties. A letter in response from AVERY DENNISON’S counsel was received by Plaintiff’s counsel on October 19, 2017.

27. Plaintiff has been damaged as a result of AVERY DENNISON’s infringing conduct. AVERY DENNISON is, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for AVERY DENNISON’s infringement, which, by law, cannot be less

than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

VI. PRAYER FOR RELIEF

Plaintiff requests that the Court find in its favor and against AVERY DENNISON, and that the Court grant Plaintiff the following relief:

a. Judgment that one or more claims of the '967 Patent have been infringed, either literally and/or under the doctrine of equivalents, by AVERY DENNISON;

b. Judgment that AVERY DENNISON account for and pay to Plaintiff all damages to and costs incurred by Plaintiff because of AVERY DENNISON's infringing activities and other conduct complained of herein;

c. That AVERY DENNISON, its officers, agents, servants and employees, and those persons in active concert and participation with any of them, be permanently enjoined from infringement of the '967 Patent. In the alternative, if the Court finds that an injunction is not warranted, Plaintiff requests an award of post judgment royalty to compensate for future infringement;

d. That Plaintiff be granted pre-judgment and post-judgment interest on the damages caused to it by reason of AVERY DENNISON's infringing activities and other conduct complained of herein;

e. That this Court declare this an exceptional case and award Plaintiff its reasonable attorney's fees and costs in accordance with 35 U.S.C. § 285; and

f. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

JURY DEMAND

Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

DATED: October 24, 2017.

/s/ John Mansfield

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